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3/31/81

NPSOP-NP

Honorable Al Swift  
House of Representatives  
Washington, DC 20515

Dear Mr. Swift:

This is further response to your 16 March 1981 inquiry inclosing a copy of a letter from Timothy W. Barr, Business Education Instructor, Redmond, Washington, concerning PCB contamination in the Duwamish River. The following information is provided in response to your inquiry.

On 13 September 1974, an electric transformer was dropped and broken while being loaded onto a barge nearly 2 1/2 miles upstream from where the Duwamish Waterway enters Elliott Bay (Puget Sound). The transformer's content, 255 gallons of PCB-1242, was spilled at a dock in Slip 1 (outside of the main river channel). Because PCB-1242 is highly insoluble and of greater density than water, the majority of the spill was localized near the dock in Slip 1. Region X of the Environmental Protection Agency (EPA) was able to recover about 90 gallons of the PCB. The Army Material Command, liable for the accident, requested the Corps of Engineers to remove PCB-contaminated bottom sediments in Slip 1. The Seattle District, using a special dredge, which allowed pumping a high concentration of solids with a minimum increase in bottom turbulence, dredged about 10,000 cubic yards of contaminated material. The dredged material was pumped 2,400 feet downstream to a diked upland disposal site. A flocculent was used to quicken settlement of sediments in the more than 10 million gallons of slurry pumped. All of the dredging water, after settling out of the solids in the disposal area, was filtered and run through a mobile EPA physical/chemical treatment unit. EPA monitoring indicated that at least 235 gallons (92%) of the PCB-1242 was successfully recovered. Additionally, sediment sampling in the remaining riverward area of Slip 1 indicated only trace amounts of the PCB-1242 above background levels.

The National Marine Fisheries Service (NOAA), has studied contaminants in bottom sediments and abnormalities in organisms found in the Duwamish Waterway. One of the results of that study is that bottom flatfish (English Sole), which live in the Duwamish Waterway sediments, have an abnormally large number of



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tumors and lesions. The exact cause of these abnormalities is not known. One might suspect that concentrations of PCB, zinc, cadmium, copper, benzo-a-pyrene, benzanthracene, polychlorinated butadines, and other contaminants found in the Duwamish River sediments may be a contributing factor. Contaminants may enter the marine environment from a number of sources including municipal and industrial effluents, anti-fouling paint, leaded gasoline, land runoff, pesticides, fungicides, ocean dumping, atmospheric fallout, combustion processes associated with industry, automobiles, home heating, etc. PCB's have been widely used in industry as heat exchanger and dielectric fluids, hydraulic and lubricating fluids, plasticizers for plastics and coatings, ingredients of caulking compounds, printing inks, paints, adhesives, carbonless duplicating paper, flame retardants, and extender for pesticides. For many years these materials were released rather indiscriminately into the environment and have become ubiquitous.

The Duwamish Waterway is presently maintained annually by clamshell dredging from the head of navigation (mile 6.1) to approximately mile 5.2 downstream. This annual dredging of the upper portion of the waterway varies between 90,000 and 200,000 cubic yards and is usually conducted in the winter. Annual dredging above mile 5.2 has acted to settle sediments in the upper part of the waterway where industrial contaminants from local sources are not as likely to be encountered. Maintenance dredging of 120,510 cubic yards upstream of mile 5.2 was completed this March. Dredging downstream of mile 5.2 by clamshell dredge is anticipated every 4 to 7 years and includes the removal of 60,000 to 300,000 cubic yards of material. Dredging downstream of mile 5.2 was last conducted during Fiscal Year (FY) 1978 and is not expected to be required before FY83 at the earliest.

Several steps have been taken to minimize health risks and prevent adverse environmental impact to the Puget Sound area. The sediments in the area of maintenance dredging have been analyzed to determine the levels of chemical contaminants present. The levels of contaminants measured in the upper waterway have been so low that EPA has permitted the disposal of this material in state and Federal-approved open-water disposal sites in Puget Sound. The Corps of Engineers will continue to cooperate with the Port of Seattle and their terminal expansion projects by disposing of dredged material behind underwater containment berms. The timing of the dredging has also been coordinated with the Washington Departments of Fisheries and Game to minimize impacts to out-migrating juvenile salmon and steelhead. Finally, a water quality monitoring program has been developed in conjunction with the Washington Department of Ecology. This monitoring occurs in the vicinity of the operating dredge and is aimed at protecting resident fish and invertebrates in the river.

An Environmental Impact Statement (EIS) and an EIS Supplement for the operation and maintenance of the Seattle Harbor Navigation Project (include the Duwamish Waterway) were filed with the Environmental Protection Agency on 21 November 1973 and 19 September 1979, respectively.

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A proposed navigation improvement project to enlarge the Duwamish Waterway is presently in the feasibility stage. Environmental studies, including an analysis of sediment chemistry, investigating the potential impacts of widening and deepening of the navigation channel are being finalized. An EIS is scheduled to be written during spring 1981. Our primary concern relative to human health effects is the disposal of dredged sediments. The feasibility study will consider several disposal alternatives, including depositing the material behind berms. This alternative would minimize redistribution of sediment contaminants such as PCB's. If the project is approved by Congress for advanced engineering and design, bioaccumulation and bioassay studies will be conducted to more fully analyze the impacts of sediment contaminants on the environment. This planning process is being pursued according to Federal regulations and in coordination with Region X, EPA. Construction of the project, if approved, is expected to begin in 1990.

I appreciate this opportunity to inform you and your constituents of my activities and plans regarding the Duwamish Waterway in Seattle.

Sincerely,

LEON K. MORASKI  
Colonel, Corps of Engineers  
District Engineer

HOUSE OF REPRESENTATIVES, U.S.  
WASHINGTON, D.C.

1981

March 16 1981

Chief of Legislative Liaison  
Department of the Army  
Room 2C631, The Pentagon  
Washington, D.C. 20310

The attached communication is submitted for your consideration, and to ask that the request made therein be complied with, if possible.

If you will advise me of your action in this matter and have the letter returned to me with your reply, I will appreciate it.

Please Review and Comment.

Very truly yours,

Al Swift WA 2nd

DBC

M.C.

District.

February 18, 1981

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The purpose of this letter is to address the PCB problem in the Duwamish River. As I'm sure you know, contamination of the water and injury to the fish habitat has occurred since PCB's from a transformer entered the Duwamish some three years ago.

A recent article, the Seattle P-I addressed this somewhat "hidden" environmental disaster. As a concerned citizen, I would like to know what your office plans on doing with the removal of these PCB's from the Duwamish.

The Corps of Engineers is dredging the river, where will the PCB's be dumped? Will the Corps be required to file an Environmental Impact Statement before they dump this toxic waste?

Your urgent attention to this matter will be greatly appreciated.

Sincerely

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